APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/069,359	02/25/2002	Peter Hovell	36-1536	8086

7590	01/09/2006

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EXAMINER
NGUYEN, MINH CHAU

ART UNIT	PAPER NUMBER
2145	

DATE MAILED: 01/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	10/069,359	HOVELL ET AL.
	Examiner	Art Unit	
	MINH-CHAU N. NGUYEN	2145	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on 11/28/05

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-18 and 21* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-18 and 21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *28 November 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)
1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
   Paper No(s)/Mail Date 07/08/02, 02/13/04
4) ☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____ .

U.S. Patent and Trademark Office
PTOL-326 (Rev. 7-05) Office Action Summary Part of Paper No./Mail Date 20051223

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

1. Claims 1-18, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsuchiya et al. (Tsuchiya) (US 6,690,669 B1), in view of Watanuki et al. (Watanuki) (US 6,172,986 B1).

2. Regarding claim 1, Tsuchiya teaches an interface for use between a first network operating in accordance with a first transmission protocol aid having network addresses in accordance with a first addressing convention herein referred to as first type addresses, and a second network operating in accordance with a second transmission protocol and having network addresses in accordance with a second addressing convention, herein referred to as second type addresses, the interface having both a first type address and a second type address and comprising:

a protocol converter arranged to convert a message having a format in accordance with the first transmission protocol, herein referred to as a first type message, into a message having a format in accordance with the second

transmission protocol, herein referred to as a second type message (i.e. the Ipv4-Ipv6 converting apparatus is a protocol converter) (Col. 8, L. 55 – Col. 11, L. 3);

an interface controller arranged to respond to receipt by the interface of a first type message from the first network (ex. the DNS substituting means 13 is an interface controller) (Col. 8, L. 55 – Col. 11, L. 3) by

(a) examining the destination address of that first type message received from the first network to determine whether the first type message is of a format in accordance with the first transmission protocol (Col. 8, L. 55 – Col. 11, L. 3), and if so,

(b) if so, sending to the protocol converter that first type message received from the first network (Col. 8, L. 55 – Col. 11, L. 3), and;

Tsuchiya fails to teach means for encapsulating, and if the destination address of that first type message is not of a format in accordance with the first transmission protocol then a second type address for use by the encapsulating means, and sending to the encapsulating means the derived second type address together with that first type message received from the first network. However, Watanuki, in the same field of endeavor having closely related objectivity, teaches means for encapsulating arranged to respond to receipt of a second type address together with a first type message by encapsulating that received first type message as the payload of a resulting encapsulating second type message, using that received second type address as the destination address of the resulting encapsulating second type message and using the second type address of the

interface as the source address of the resulting encapsulating second type message (Col. 14, L. 55-Col. 16, L. 22; and Col. 18, L. 20-Col. 19, L. 39); and Watanuki teaches

(c) if not, deriving, directly or indirectly, from the destination address of that first type message, a second type address for use by the encapsulating means (see Watanuki, Col. 14, L. 55-Col. 16, L. 22; and Col. 18, L. 20-Col. 19, L. 39), and sending to the encapsulating means the derived second type address together with that first type message received from the first network (see Watanuki, Col. 14, L. 55-Col. 16, L. 22; and Col. 18, L. 20-Col. 19, L. 39).

Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have incorporated Watanuki's teachings of means for encapsulating, and if the destination address of that first type message is not of a format in accordance with the first transmission protocol then a second type address for use by the encapsulating means, and sending to the encapsulating means the derived second type address together with that first type message received from the first network, with the teachings of Tsuchiya in the communicating method between IPv4 terminal and IPv6 terminal and IPv4-IPv6 converting apparatus, for the purpose of providing more scalable communication between any two terminals.

3. Regarding claim 2, Tsuchiya and Watanuki disclose the invention substantially as claimed. Tsuchiya teaches the controller is arranged to derive the second type

address directly by retrieving it from a predetermined subaddress field of the

destination address (Col. 8, L. 55 – Col. 11, L. 3).

4. Regarding claim 3, Tsuchiya teaches and Watanuki disclose the invention

   substantially as claimed. Tsuchiya teaches the controller is arranged to derive

   the second type address indirectly by accessing, in accordance with the

   destination address, a look-up table having entries in the form of a first type

   address associated with a second type address, and retrieving the second type

   address of an entry having a first type address matching the destination address

   (i.e. the IP address conversion table 151 is a look-up table) (Col. 8, L. 55 – Col.

   11, L. 3).

5. Regarding claim 4, Tsuchiya teaches each entry of the look-up table comprises a

   field for containing an identifier for identifying whether the controller is to send

   that first type message received from the first network to the protocol converter

   (Col. 8, L. 55 – Col. 11, L. 3).

   Tsuchiya fails to teach the controller is to send the first type message

   received from the first network to the encapsulating means. However, Watanuki,

   in the same field of endeavor having closely related objectivity, teaches the

   controller is to send the first type message received from the first network to the

   encapsulating means (Col. 11, L. 1-25; and Col. 14, L. 55-Col. 16, L. 22; and Col.

   18, L. 20-Col. 19, L. 39).

Thus, it would have been obvious to one of ordinary skill in the art at the
time the invention was made to have incorporated Watanuki's teachings of the
controller is to send the first type message received from the first network to the
encapsulating means, in the teachings of Tsuchiya in the communicating method
between IPv4 terminal and IPv6 terminal and IPv4-IPv6 converting apparatus, for
the purpose of providing a method called an IP tunneling, which is proposed of
providing more scalable communication between any two terminals.

6. Regarding claim 5, Tsuchiya and Watanuki disclose the invention substantially as
claimed. Watanuki teaches the encapsulating means comprises a plurality of
different encapsulators, each encapsulator being arranged to operate in
accordance with a respective encapsulation type, and the controller is arranged
to send that first type message received from the first network to the appropriate
one of said plurality of different encapsulators in dependence upon the format of
the destination address of that first type message (i.e. a plurality of different
encapsulators is arranged to operate with a respective encapsulation type, such
as IPv4 encapsulation or IPv6 encapsulation) (Col. 14, L. 55-Col. 16, L. 22; and
Col. 18, L. 20-Col. 19, L. 39).

7. Regarding claim 6, Tsuchiya and Watanuki disclose the invention substantially as
claimed. Watanuki teaches encapsulating means comprises a plurality of
different encapsulators, each encapsulator being arranged to operate in

accordance with a respective encapsulation type, and the controller is arranged

to send that first type message received from the first network to the appropriate

one of said plurality of different encapsulators in dependence upon the format of

the destination address of that first type message (i.e. a plurality of different

encapsulators is arranged to operate with a respective encapsulation type, such

as IPv4 encapsulation or IPv6 encapsulation) (Col. 14, L. 55-Col. 16, L. 22; and

Col. 18, L. 20-Col. 19, L. 39); and

wherein each entry of the look-up table comprises a field for containing an

identifier for identifying a type of encapsulation (ex. the mobile node

management table 126 is the look-up table which contains the node address.

Base on this address, it would identify a type of encapsulation) (Col. 11, L. 1-25;

and Col. 14, L. 55-Col. 16, L. 22; and Col. 18, L. 20-Col. 19, L. 39).

8. Regarding claim 7, Tsuchiya and Watanuki disclose the invention substantially as

claimed. Watanuki teaches un-encapsulating an encapsulating second type

message to retrieve its payload (i.e. un-encapsulating the IPv4 encapsulated

IPv6 packet to retrieve its payload (i.e. the ordinary IPv6 packet)) (Col. 19, L. 10-

39).

9. Regarding claim 8, Tsuchiya and Watanuki disclose the invention substantially as

claimed. Tsuchiya teaches the protocol converter is further engaged to convert a

second type message into a first type message (i.e. the IPv4-IPv6 converting

apparatus converts the IPv4 packet (ex. second type message) into the IPv6

packet (i.e. first type message)) (Col. 21, L. 45-Col. 23, L. 14; and figure 19-21).

10. Regarding claim 9, Tsuchiya teaches a method of operating an interface between

a first network and a second network, the first network having network addresses

in accordance with a first addressing convention, herein referred to as first type

addresses, and transmitting messages in accordance with a first transmission

protocol, herein referred to as first type messages, and the second network

having network addresses in accordance with a second addressing convention,

herein referred to as second type addresses, and transmitting messages in

accordance with a second transmission protocol, herein referred to as second

type message, the method comprising:

examining the destination address of a first type message received from the

first network (Col. 8, L. 55 – Col. 11, L. 3); and

if the destination address of that received first type message is of a first

predetermined format in accordance with the first addressing convention,

protocol converting that received first type message (Col. 8, L. 55 – Col. 11, L. 3);

Tsuchiya fails to encapsulating that received first type message in

accordance with the second transmission protocol if the destination address of

that received first type message is not of a first predetermined format in

accordance with the first addressing convention. However, Watanuki, in the

same field of endeavor having closely related objectivity, teaches encapsulating

that received first type message in accordance with the second transmission protocol, using, as the destination address of a resulting encapsulating second type message, a second type address derived, directly or indirectly, from the destination address of that received first type message if the destination address of that received first type message is not of a first predetermined format in accordance with the first addressing convention (Col. 14, L. 55-Col. 16, L. 22; and Col. 18, L. 20-Col. 19, L. 39).

Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have incorporated Watanuki's teachings of encapsulating that received first type message in accordance with the second transmission protocol if the destination address of that received first type message is not of a first predetermined format in accordance with the first addressing convention, in the teachings of Tsuchiya in the communicating method between IPv4 terminal and IPv6 terminal and IPv4-IPv6 converting apparatus, for the purpose of providing more scalable communication between any two terminals.

11. Regarding claim 11, Tsuchiya and Watanuki disclose the invention substantially as claimed. Watanuki teaches the second predetermined address format includes an identifier identifying an encapsulation type (i.e. the mobile node management table 126 is the look-up table which contains the node address.

Based on this address, it would identify a type of encapsulation) (Col. 11, L. 1-25;

and Col. 14, L. 55-Col. 16, L. 22; and Col. 18, L. 20-Col. 19, L. 39).

12. Regarding claim 12, Tsuchiya and Watanuki disclose the invention substantially

as claimed. Tsuchiya teaches the first predetermined format includes a first

predetermined portion whose content identifies that received first type message

as suitable for protocol conversion (i.e. the IPv6 destination address filed of the

packet is a first predetermined portion) (Col. 8, L. 55 – Col. 11, L. 3).

13. Regarding claim 13, Tsuchiya teaches the first predetermined format includes a

first predetermined portion whose content identifies that received first type

message as suitable for protocol conversion (Col. 8, L. 55 – Col. 11, L. 3).

Tsuchiya fails to teach the first predetermined format also includes a second

predetermined portion whose content constitutes the second type address used

as the destination address of a resulting encapsulating second type message.

However, Watanuki, in the same field of endeavor having closely related

objectivity, teaches the first predetermined format also includes a second

predetermined portion whose content constitutes the second type address used

as the destination address of a resulting encapsulating second type message

(Col. 14, L. 55-Col. 16, L. 22; and Col. 18, L. 20-Col. 19, L. 39).

Thus, it would have been obvious to one of ordinary skill in the art at the time

the invention was made to have incorporated Watanuki's teachings of the first

predetermined format also includes a second predetermined portion whose

content constitutes the second type address used as the destination address of a

resulting encapsulating second type message, in the teachings of Tsuchiya in the

communicating method between IPv4 terminal and IPv6 terminal and IPv4-IPv6

converting apparatus, for the purpose of providing more scalable communication

between any two terminals.

14. Regarding claim 15, Tsuchiya and Watanuki disclose the invention substantially

as claimed. Tsuchiya teaches the examining step comprises the substeps of

retrieving the destination address from the received first type message, and

accessing a look-up table in accordance with the retrieved destination address

(Col. 10, L. 25 – Col. 11, L. 3).

15. Regarding claim 17, Tsuchiya teaches the look-up table entries include a first

identifier field containing an identifier identifying that first type message is to be

protocol converted, and including the steps of retrieving the identifier from the

first identifier field of the entry having its first type address matching the

destination address, and checking that the retrieved identifier is consistent with

protocol conversion is to be preformed upon that received first type message

(Col. 8, L. 55 – Col. 11, L. 3).

Tsuchiya fails to teach whether that first type message is to be encapsulated,

and checking that the retrieved identifier is consistent with encapsulation is to be

preformed upon that received first type message. However, Watanuki, in the

same field of endeavor having closely related objectivity, teaches the first type

message is to be encapsulated, and checking that the retrieved identifier is

consistent with encapsulation is to be preformed upon that received first type

message (Col. 14, L. 55-Col. 16, L. 22; and Col. 18, L. 20-Col. 19, L. 39).

Thus, it would have been obvious to one of ordinary skill in the art at the time

the invention was made to have incorporated Watanuki's teachings of the first

type message is to be encapsulated, and checking that the retrieved identifier is

consistent with encapsulation is to be preformed upon that received first type

message, in the teachings of Tsuchiya in the communicating method between

IPv4 terminal and IPv6 terminal and IPv4-IPv6 converting apparatus, for the

purpose of providing a method called an IP tunneling, which is proposed of

providing more scalable communication between any two terminals.

16. Regarding claim 18, Tsuchiya and Watanuki disclose the invention substantially

as claimed. Watanuki teaches the look-up table entries includes a second

identifier field containing an identifier identifying an encapsulation type, and when

there is a plurality of encapsulation types available, and including the steps of

retrieving the identifier from the second identifier field of the entry having its first

type address matching the destination address, and checking that the retrieved

identifier is consistent with the type of encapsulation to be performed upon that

received first type message (i.e. a plurality of encapsulation types, such as IPv4

encapsulation or IPv6 encapsulation) (Col. 14, L. 55-Col. 16, L. 22; and Col. 18,

L. 20-Col. 19, L. 39).

17. Claim 10 is corresponding claim of claim 9. Therefore, it is rejected under the

same rationale.

18. Claims 14 and 16 are corresponding method claim of apparatus claims 2 and 3.

Therefore, they are rejected under the same rationale.

19. Claim 21 is corresponding apparatus claim of method claim 9. Therefore, it is

rejected under the same rationale.

The following is a listing of the prior art of record relied upon in the rejection of

claims under appeal.

- US 6,781,991 B1 Anderlind   08-2004

- 6,038,233 Hamamoto et al.   03-2000

- US 6,172,986 B1 Watanuki et al.   01-2001

- US 6,708,219 B1 Borella et al.   03-2004

Response to Arguments

20. Applicant's arguments filed 11/28/05 with respect to claims 1-18, and 21 have been fully considered but they are not persuasive. In the remarks, Applicant argued in substance that:

21. (A) Neither of the cited references (Tsuchiya and Watanuki) sets out to provide an universal solution and creating the combination of transmission between domain types by considering the destination address to determine its format and handling the message either by use of the protocol converter or by encapsulation of the message with a derived second type address.

> As to point (A), the patents (Tsuchiya and Watanuki) do disclose the combination of transmission between domain types by considering the destination address to determine its format and handling the message either by use of the protocol converter or by encapsulation of the message with a derived second type address. Transmission between domain types by considering the destination address to determine its format and handling the message by use of the protocol converter (see Tsuchiya, Col. 8, L. 55 – Col. 11, L. 3) (i.e. the Ipv4-Ipv6 converting apparatus is a protocol converter); and the handling the message by use encapsulation of the message with a derived second type address (see Tsuchiya, Col. 2, L. 6-21; and see Watanuki, Col. 14, L. 55-Col. 16, L. 22; and Col. 18, L. 20-Col. 19, L. 39).

22. (B) Examiner has failed to identify any teaching in either of the cited references

that could have "suggested" the combination now being proposed by Examiner in

hindsight.

As to point (B), Examiner does identify a teaching in the Tsuchiya patent

which could have suggested the combination such as transmission

between domain types by considering the destination address to

determine its format and handling the message by use of the protocol

converter (see Tsuchiya, Col. 8, L. 55 – Col. 11, L. 3), and the handling

the message by use encapsulation of the message with a derived second

type address in the background of the invention which Tsuchiya does

propose (see Tsuchiya, Col. 2, L. 6-21). Moreover, Examiner does identify

a teaching in the Watanuki patent which teaches the handling the

message by use encapsulation of the message with a derived second type

address (see Watanuki, Col. 14, L. 55-Col. 16, L. 22; and Col. 18, L. 20-

Col. 19, L. 39).

In response to applicant's argument that Examiner recognizes that

obviousness can only be established by combining or modifying the

teachings of the prior art to produce the claimed invention where there is

some teaching, suggestion, or motivation to do so found either in the

references themselves or in the knowledge generally available to one of

ordinary skill in the art. See *In re Fine,* 837 F.2d 1071, 5 USPQ2d 1596

(Fed. Cir. 1988) and *In re Jones,* 958 F.2d 347, 21 USPQ2d 1941 (Fed.

Cir. 1992). In this case, the motivation to combine is to provide the

solution and create the combination of transmission between domain

types by considering the destination address to determine its format and

handling the message either by use of the protocol converter or by

encapsulation of the message with a derived second type address.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to MINH-CHAU N. NGUYEN whose telephone number is

(571)272-4242. The examiner can normally be reached on Monday-Friday from 8:00am

- 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, JASON D. CARDONE can be reached on (571) 272-6159. The fax phone

number for the organization where this application or proceeding is assigned is 571-

273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

Examiner: Minh-Chau Nguyen
Art Unit: 2145

MN

JASON CARDONE
SUPERVISORY PATENT EXAMINER